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AMERIGONISCUS MALHEURENSIS, NEW SPECIES, FROM A CAVE IN WESTERN OREGON (CRUSTACEA: ISOPODA: TRICHONISCIDAE)

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Abstract.—A new species of *Amerigoniscus* Vandel, a genus with 8 other species in the United States, is described and illustrated from Malheur Cave in western Oregon.

The new species is the third trichoniscid and the second in the genus *Amerigoniscus* Vandel (1950) to be described from Oregon. The first species is *Oregoniscus nearcticus* (Arcangeli, 1932) from MacLeary Park, Portland, and the second is *Amerigoniscus rothi* (Vandel, 1953a) from 8 mi (12.9 km) east of Gold Beach, near the California border. Neither was from a cave although both are blind and have little or no body pigment. The new species described here is from Malheur Cave in Harney County in western Oregon. It also has no eyes or body pigment.

The two male specimens were collected by E. H. Gruber and sent to me by Jerry Lewis, University of Louisville, Kentucky, and I thank him for sending them to me.

Amerigoniscus Vandel

The genus was recently reviewed by Vandel (1977) who included information on the four species and added four new ones. This then is the ninth species placed in the genus. All are from the United States, from Georgia through Texas to Oregon. Only *A. rothi* Vandel is not from a cave. Vandel separated the eight species by using the configurations of the tip of the exopod of male pleopod 1 of each species. He illustrated that structure for all eight species. Unfortunately for the four new species which he described that is all he illustrated, but the four species are sufficiently different morphologically and geographically so as not to be confused with the new species described here.

The relation of *Amerigoniscus* Vandel to *Oregoniscus* Hatch (1947) as discussed by Vandel (1953a:177) is still unsettled since *O. nearcticus* (Arcangeli) is based on a female. Vandel (1953b) also discussed some of the species of the genus, and species of related genera of Trichoniscidae. He placed the first described species of *Amerigoniscus* in *Caucausonethes* Verhoeff and the genus was included among the primitive members of the family Trichoniscidae in Tribe 1. However, when later (Vandel 1977) he changed the generic name of the species from the United States back to *Amerigoniscus* he did not mention the placement of the genus in any subgroup within the Trichoniscidae.

Amerigoniscus malheurensis, new species
Figs. 1A–N, 2A–C

There are no illustrations of the whole animal of any species of the genus. Unfortunately the two specimens collected here were too distorted to be drawn, but the appendages are definitive and are illustrated.

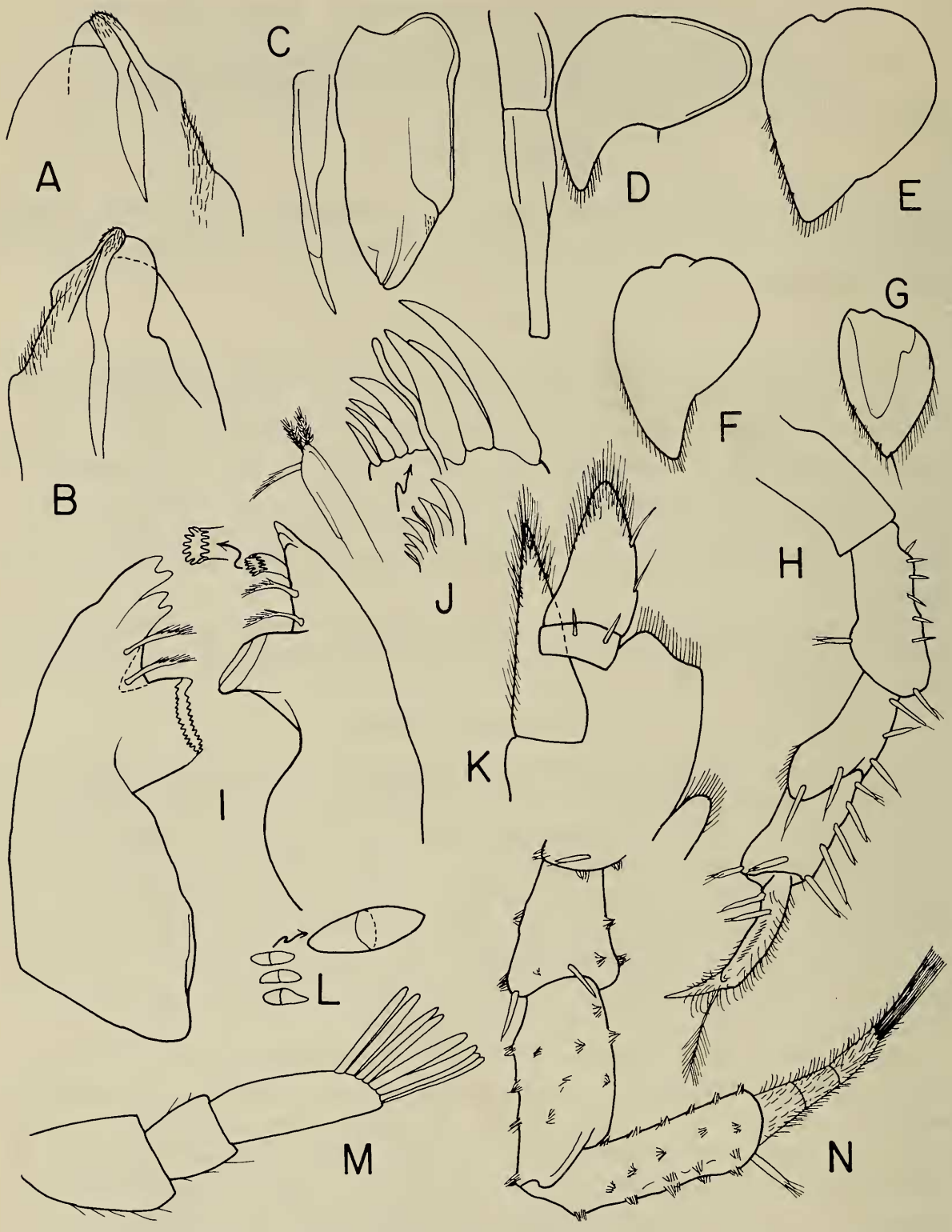

Fig. 1. *Amerigoniscus malheurensis,* holotype male 3.5 mm long: A, Detail tip exopod male pleopod 1; B, Reverse of A; C–G, Pleopods 1–5 respectively; H, Peraeopod I (twisted); I, Mandibles; J, Maxilla 1; K, Maxilliped; L, Fungal spores (small ones same scale as mandibles); M, Antenna 1; N, Antenna 2.

Description.—Eyeless, pigmentless. Cephalon and body covered with tuberclelike scale groups. Few scale groups on top and one row on posterior margin of cephalon; 2 rows on peraeonal segments, especially apparent on segments I–V; few on edges of pleonal segments. Antenna 1 with 8 aesthetascs. Antenna 2 short,

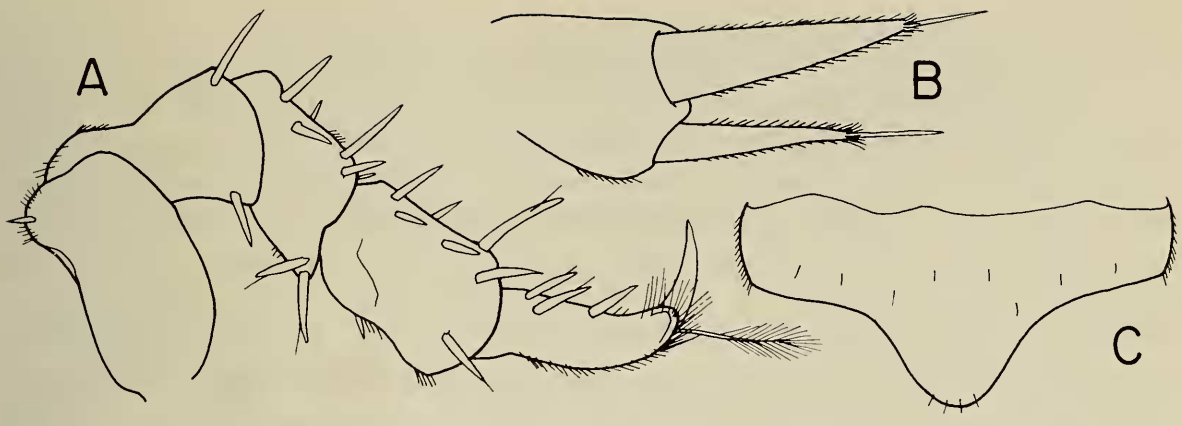

Fig. 2. *Amerigoniscus malheurensis*, holotype male: A, Peraeopod VII; B, Uropod; C, Pleotelson.

with 3 flagellar articles. Mandibles each with well developed molar process and 2 setae in setal row. Right mandible with 3 teeth on incisor process; lacinia mobilis with apical crown of small teeth. Left mandible with 4 teeth on incisor with 2 on each of 2 sections. Endopod of maxilla 1 with 2 penicillate setae on apex and 1 longer subapical compound seta. Exopod with 8 teeth and 1 broad seta on apex. Maxilliped with pointed endite and palp of 2 segments with apical segment large, pointed and fringed with small setae.

Peraeopod I of male with 2 setae on proximal inner margin of propodus (probably sexually dimorphic character, but females not obtained). Peraeopod VII of male with 3 large setae on inner margin of propodus; carpus with simple arrangement of setae. Featherlike dactylar organ present on all peraeopods. Pleopod 1 with large exopod with configuration of tip unique (Fig. 1A, B). Pleopod 2 with exopod with medial posterior margin produced; 1 seta medially placed on posterior margin. Endopod with proximal segment shorter than length of exopod; distal segment elongate and tapered to truncate end. Pleopods 1–3 as illustrated. Uropodal rami each with 1 large seta at tip. Pleotelson with posterior margin produced, rounded, and with 4 small setae.

Length.—Both males 3.5 mm long.

Type-locality.—Malheur Cave, about 18 mi (29 km) southeast of New Princeton (on Oregon route 78), Harney County, Oregon.

Distribution.—Known only from type-locality.

Etymology.—The name *malheurensis* means from Malheur, the name of the cave which is the type-locality.

Disposition of types.—The type-specimens have been placed in the National Museum of Natural History (Smithsonian Institution), holotype male USNM 184664; paratype male USNM 184665.

Discussion.—The species differs from *A. rothi* in that the configurations of the tips of the exopods of male pleopods 1 are quite different (cf. Vandel, 1977:308, Fig. 1, and Fig. 1A here). Although the various configurations illustrated by Vandel (1977) are quite different, the best match is between the tip of the exopod of the new species and that of *A. rothi*. There are, however, many differences in other structures if the illustrations of Vandel (1953a) are compared to those included here. Vandel illustrated 11 aesthetascs on antenna 1 and six flagellar articles on antenna 2 for *A. rothi*. There are eight aesthetascs and three flagellar

articles on the new species. The general shape of the exopods of pleopods 1 (excluding details of tip) have different shapes in the two species. Male pleopods 2 are also differently shaped—in the new species the exopod has the medial posterior edge or tip produced; it is a right angle in *A. rothi*. The proximal segment of the endopod is proportionately shorter and the tip of the distal segment elongate and narrowed to a truncate, not pointed, end in the new species. There are other minor differences which can be seen by comparing the drawings of the two species.

Ecology.—The type-specimen was found under a rotted stick in the flood zone at the 1325 foot (397.5 m) level. The paratype was found under a plank in the flood zone at the 1400 foot (420 m) level. The guts from the mouth to the anus of both specimens were stuffed with fungal spores on which they were apparently feeding. The spores are two-chambered (Fig. 1L) and most probably from a fungus of the Deuteromycetes, Didymosporae group. No mycelia were present.

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